

A FUTURE PROGRAM FOR CASE

My first duty this morning must be to express my thanks to the Board of Trustees, the members of the Faculty, and the Alumni for having given me the high privilege of serving Case Institute of Technology. I have accepted this position with anticipation and humility and with a deep sense of responsibility to those who have preceded me and to those now engaged in building a greater Case.

My sense of great privilege stems from the fact that I am made daily aware of the heritage which I consider myself fortunate to receive. Into that heritage has gone the vision of Leonard Case, who in 1881 set aside certain funds and "caused to be formed and regularly incorporated under the laws of Ohio an institution of learning to be called The Case School of Applied Science, in which should be taught by competent professors and teachers" the various subjects connected with science and engineering. This idea has been carried into reality by my three predecessors—Dr. Cady Stanley, first president of Case, Dr. Charles Sumner Howe, and Dr. William E. Hickendorf—and by the generous support of alumni, trustees, and faculty. It is interesting to note—and I suggest that great stability and high standards of performance have resulted from the fact—that the average age of years for Case presidents is twenty-two years as compared with the national average of five years for all colleges in the nation.

Case has been happy indeed in the devoted company of teachers, past and present, whose ability in performing their tasks speaks for itself in the attainments of the graduates of this institution. We are further fortunate in maintaining loyalty of the members of our Board of Trustees, whose important function it is to direct the policies of the college. One of the important measures of the worth of a college is the quality of its alumni body. Case stands high in this regard, and I have found our alumni constantly helpful as I have met with them in Cleveland and in other cities throughout the East and Midwest.

I am grateful for the fact that these inauguration ceremonies are taking place following an orientation period of nine months on the campus. During the past two years many colleges have been seeking for men to fill presidential vacancies. Many articles have been written telling of the qualifications to be met and describing the tasks which face most college presidents. With your permission, I would like to quote from the late Dr. Wickenden's farewell address to our alumni body given on May 24th last year.

In describing the task of the president, he said:

"There is usually a honeymoon period of great expectations, then a period of disillusionment with the no-longer God-like president in hot water with either his faculty, his students, his alumni, or his trustees, or perhaps even with all of them at once. If he survives, he learns some valuable lessons.

He learns that the right way of doing things is often more important than the right things to do. He learns that colleges are run on a subtle and volatile thing called morale and not on formal authority. As he grows wiser he

sets a guard on his drive, so as not to overreach the authority of the trustees and not to override the will of the faculty. He learns not to try persuasion until he has first appealed to imagination and not to employ authority until both suggestions and persuasion have failed; to praise as much as he dares and to criticize only as much as he must. His dignity, like his academic costume, needs to be handy for occasions, but had best be kept hanging in the closet most of the time. It is his part never to be formidable, but never to slop over; never to be prudish or prim, but never to be cheap; never to be rigid in opinion or manner, but never to be pliable in the hands of others; and always to conceal beneath an outer mask of open-mindedness and adaptability, a core of convictions that he will defend with his life."

I hope that I may profit from these words born of years of experience which seem to say, this is a task which will demand the best of any man with sufficient reward to satisfy any man.

I have, as you all know, come to Case directly from the world of business. The disadvantages of my lack of familiarity with the field of education are obvious; but let me speak of some of the possible advantages. An engineering college normally prepares young men for a career in the industrial and business world. Most of our graduates anticipate the fulfillment of their desires in the industrial field. A business executive must interest himself in the quality and well-being of his men— that precious ingredient that goes into the product or service for which his company is organized. Hence, he has more opportunity than most to judge the adequacy of the education of the young engineer

or scientist not only in his field of technical specialization but in his ability to handle himself in various situations and with all types of people.

I think seemed to me that, more and more in the business world, men are coming to appreciate the fact that technical knowledge alone— and I use the word "technical" in its broadest sense—is not sufficient to make a man valuable or satisfied either in business, political, or social life. The conditions of our present-day existence, the vastness of our mass knowledge, the extension of man's power for good or evil make it a matter of great importance that the individual be made to realize just where his particular abilities and education fit in the whole scheme of things. The discussions which have preceded this assemblage, participated in by eminent persons in the fields of government, science, engineering, industry, and education, have given us fair warning of the demands of the future. In my humble opinion, it devolves upon all of us who have dedicated our lives to this challenging field of education to take heed and chart the course ahead with vision and courage. It should be our aim at Case to provide for the student a fine technical education and, in addition, to develop within him an appreciation of the significance of his chosen profession in our society and of the unique contribution he can make as a citizen and as a professional man. Equally important must be the realization that his is only one part of a tremendously complicated system; that other people are making important contributions in other fields, equally great in one sense and equally insignificant

when viewed in the broadest sense. Unless we imbue our students with these values, we are not, in my opinion, fulfilling completely the requirements for higher education in the technical fields.

In the light of this broad premise, I should like to direct your thought to several of the problems facing engineering education and to the role which Case Institute of Technology may be expected to play in the years to come.

One of the most vexing problems of higher education is excessive numbers. At present our enrollments are swollen for good and sufficient reasons; it has been an honorable duty and a social responsibility to minister to the needs of ex-servicemen as best we can--and Case with an average of more than 75 per cent veterans for the past three years has discharged this duty well. But when the present undergraduate wave recedes, what then? The numbers clamoring at our gates for entrance will surely be greater than before the war. In the name of democracy--one of the most misused words in the language--we shall probably be urged to open our doors to all who wish to enter.

Yet it is my conviction that if Case is to serve democracy well, we dare not impair the education of future leaders by the presence of numbers not intellectually qualified for the privileges of our education. To me, "mass education" is a contradiction of terms; I think of alma mater as a mother knowing and instructing her children as individuals, not as an assembly line designed to step up production of identical articles. Case's tradition is that of a small college with close personal relationship between students and faculty leading to individual mastery of fundamentals.

Our heritage dictates that we must stand for quality, not quantity in the future; in that way, Case can best serve the community and the nation by providing leaders. We shall, therefore, remain a small college upholding quality in the face of popular clamor for quantity.

A second problem of modern education is what might be termed an irrelevant expansion into fields and activities which it is not the college's business to enter. This danger is more subtle—and it imposes on those who criticize this irrelevant expansion the duty of defining the true function of the college. While it is true that one major aspect of education lies in preparation for earning a living, the real function of an engineering college lies not in mere vocationalism or training for a job. Our essential task is to train the mind. This preparation should equip our graduates to face life with a sense of integrity, an insatiable intellectual curiosity, an ability to discern the true from the false, the mediocre from the excellent, and a respect for the orderliness of a universe which finds itself best interpreted in scientific laws and principles.

To achieve these qualities in the graduates of engineering colleges, we must recognize that training and education are essentially different. Vocational training, which has no aim beyond itself, is one of the irrelevant expansions that has no place in the functions of the college. On the other hand, education for a profession such as engineering can and should be concerned with underlying principles rather than with the acquisition of specialized knowledge and techniques. The difference between training and education is thus not merely one of method but of breadth.

To achieve such breadth, engineering education must learn to relate and integrate the teaching of the humanities with the professional preparation of the engineer. It seems to me that our past failures in this phase of our education rest on our thinking of the humanities and science as two separate compartments of knowledge. Sometimes we have vainly attempted to give a better balance to our curricula by merely adding more humanities--but what is needed is not a balance but a synthesis of these two aspects of man's knowledge. This synthesis can be achieved only through broadly prepared faculty members who grasp the fundamental interrelationship of all fields of knowledge. We must insist on great teachers in both the sciences and the humanities--teachers who are keenly aware of the danger of the compartmentalization of knowledge which treats physics as if it were divorced from philosophy, chemistry from literature, and mathematics from art. We hear much of the need for general education in the discussions by educators today; I submit that we shall obtain this only from teachers who, though specialists, are competent to impart a general attitude toward knowledge both inside and outside the classroom. With such a staff of teachers, we need no longer be concerned about the number of humanities courses in the curriculum and the other matters of academic discussion.

Another of the problems facing the engineering colleges of the country is to determine the proper place of fundamental and applied research on the campus. It must be evident to all that active participation in research provides a great incentive to our teaching staff and that an improvement in the quality of their teaching should be a direct result of these activities.

However, in some instances this function has been stressed to the point that it seems that research may well overpower the basic objective of providing the best possible educational program for the student body. Research and other non-teaching activities should not be carried on merely as a means of augmenting the income of either the college or the teacher. This statement places on the administration and trustees of any college the responsibility of providing adequate terms of service for the faculty. It is my opinion that there should be maintained a proper balance between the research and teaching activities, and that research should be undertaken principally as a direct benefit to the educational program. Industry will do well to support such researches since it will expect to employ men who, through this medium, have been given an opportunity to develop their abilities to search for new knowledge and to apply themselves to the solution of technological problems in the future. In many instances, the products and by-products of institutional research may be of immediate benefit to the sponsor. Case has established a notable record in this field, and it should be our purpose to continue these activities to the end that we may contribute to society through research, and for that purpose we must provide the laboratories and other facilities and encourage the development of an environment which will attract great teachers and scholars to our campus.

Finally, we come to the problem of the source to which the privately endowed college may look for financial support in the future. The Report of the President's Commission on Higher Education

has made it apparent that only publicly controlled institutions may expect financial aid from the Federal Government; Case and similar colleges must, therefore, continue to look to private enterprise and individual philanthropy for financial aid. With this situation I have no quarrel, for we can retain our independence best if we derive our support from those who believe in the worth of the privately endowed college. It is evident to me that engineering education on the one hand and business and the professions are inseparably joined. This interdependence may be expressed in terms familiar in normal business practice. The educational institution keeps a ledger and seeks to make a profit that is not measured in dollars but in accomplishments. In return for the expenses incurred, such an institution produces as its finished product graduates and postgraduates well grounded in the fundamentals that make them useful citizens of the world. If these dividends are to continue, the industries of our nation must accept partial responsibility for the costs involved.

In summary, then, it is my conviction that Case must remain small, insisting on quality rather than quantity as the criterion of its efforts; that its education be directed toward breadth rather than specialization; that research will be employed as a tool for improving the caliber of its educational techniques; and that it will look to industry as a source of continuing support because of the great stake which industry has in our type of institution.

Our concern during the past eight months has been to translate these generalities into the specific terms of our curriculum, our physical plant, and our personnel. To that end, we have instituted the Case Self-Survey which is working on a blue print of our future. More than seventy faculty members, a number of visiting educational experts, and several thousand of our alumni have given us their counsel in this project. Our sole concern has been to find an answer to the question, "What can be done to make Case a better college in the future?" The final answer to this question will appear sometime next year in a complete report, which will represent what is probably one of the most thorough and comprehensive studies ever made of the objectives and needs of an engineering college.

I hope that many of you will share my own anticipation of the results of this year's thinking at Case. It has been for me an exciting and vastly instructive year. I have come to know of the very solid achievements of this college in the past and to look forward to the promising years ahead—years in which I shall count heavily on the faculty, the trustees, the alumni, and on industry to work together for the good of the college. With such support, we cannot fail, for ours is a proud heritage from the past, and we now look confidently ahead to a greater destiny—"A Case for the Future."